$$\mathrm{F}(u) = \mathrm{F}[\phi(x)] + \mathrm{X}\mathrm{F}'[\phi(x)]\,\phi'(x) + \frac{1}{1.2}\frac{d}{dx}\mathrm{X}^2\mathrm{F}'[\phi(x)]\,\phi'(x) + \&c$$

wherein

$$\mathrm{X} = x - f[\phi(x)].$$

From this result the author deduces the theorems of Laplace and Lagrange for the expansion of implicit functions; and he shews that, through the arbitrary character of $\phi(x)$, they are particular cases of a class of theorems, infinite in number. Applied to the solution of the equation $f(u) = x$, by making $\mathrm{F}(u) = u$, this method gives that root which will be represented by $\phi(v)$, in which v is the least root of the equation

$$f[\phi(v)] = x.$$

The President read the following letter from Mr. Cooper:—

"*Markree Castle, July* 3, 1846.

"My dear Sir,—I now beg to transmit to you, for the favourable consideration of the Academy, the observations we have been able to make on comets at this Observatory, during the first six months of this year. They are preceded by the places of some stars with which we compared the comets, and which we were forced to determine, as they were not included in any catalogue we possess. The results of observations, made by Mr. Graham principally, for polar point on circle, are also added. The dates without places, signify that we have the observation, but not yet the stars of comparison.

"Believe me, my dear Sir,

"Your's very sincerely,

"Edward Cooper.

"*The Rev. H. Lloyd, D. D.*
&c. &c. &c."